

Higher Education Models of Change: Examination Through the Typology of Six Models

IN THIS ARTICLE, research illustrating the application of the six models of change to higher education institutions will be presented. This research review is intended to identify the explanatory power of these models for higher education institutions. There has never been a thorough review of these models summarizing their findings or comparing their abilities to explain the change process. This synthesis will be used to inform and develop the research-based principles on change outlined in article six.

As outlined in article three, there are distinctions among models of change. Some document how it is actually occurring (models evolving from experience), whereas others describe effective approaches or advocate an approach (idealized models). It is important to be aware of this primary distinction in reviewing change theories. Understanding which models best explain the way change is occurring documents current practices. Yet idealized models, even if they have not been effective, may offer solutions to problems or hurdles in the creation of change. The studies presented in this article reflect both types of models—in practice and idealized.

As in the general change literature, teleological and evolutionary models are most prominent within the higher education literature. Political models are much more prevalent in higher education than in the general literature, but life-cycle and cultural models appear to be underused. There is a growing body of research in higher education examining change through a social-cognition perspective. So far, the cumulative evidence suggests that change can

best be explained through political, social-cognition, and cultural models. Evolutionary models highlight some key characteristics of change, including homeostasis, interactivity of strategies, and accretion. Life-cycle models have, for the most part, not been applied to higher education institutions, but show promise for helping to develop explanations of how organizational change occurs.

There is mixed evidence about the explanatory power of teleological models, but to date they appear to have limited support from the research in terms of how change actually occurs in higher education and of efficacy for facilitating change. Some strategies have proven successful for creating change, such as incentives or vision. Much of the teleological literature advocates a less political or symbolic approach, describing these approaches as dysfunctional characteristics of higher education institutions. Although political models might explain the way change occurs in higher education, scholars within the teleological tradition argue that political models might not be helpful in facilitating positive change. Teleological theories are often idealized models. The promise within the teleological tradition is that it provides techniques for creating change—which might otherwise not happen—through adaptation, interest-group conflict, or personal development. A general discussion of the application of each category of models is followed by themes that have emerged in the research. Gaps in the research will be elaborated on in article seven.

Evolutionary

Evolutionary models have been applied to higher education institutions with mixed interpretive power. Sporn (1999) provides a comprehensive synthesis of evolutionary models applied to higher education institutions in her book, *Adaptive University Structures*. These models have gained popularity as researchers argue that colleges and universities are vulnerable to the external environment, which is perceived as playing a more direct role in higher education affairs. The proof for these claims lies in recent accountability and assessment movements, performance funding, declining state revenues, public concern that universities are not fulfilling their teaching obligation, and activist trustees (Chait, 1996; Gumpert and Pusser, 1999; Sporn, 1999). At this point, there is limited empirical proof as to whether these forces are actually creat-

ing change. Instead, there is evidence that resource constraint in the 1970s and late 1980s led to strategies for avoiding change (rather than creating change), such as rapid tuition increases, limitation on student enrollments, ad hoc planning, and budget discipline (Gumport and Pusser, 1999).

The literature on evolutionary models applied to higher education provides useful insights on the following aspects of the change process: (1) change tends to occur through differentiation and accretion (Clark, 1983a; Gumport, 2000); (2) the importance of the concept of loosely coupled systems for understanding change (Clark, 1983a; Rubin, 1979; Sporn, 1999); (3) the need for homeostasis and stability; (4) the limitations of traditional strategic planning (Chaffee, 1983; Keller, 1983; Mintzberg, 1994); (5) the need to negotiate competing forces; (6) the differential impact of environmental conditions on varying institutional types or administrative/academic units (Cameron, 1991; Rhoades and Slaughter, 1997); (7) rapid change is usually the result of resource dependency (St. John, 1991); (8) moderating internal forces to the external environment; and (9) responsive or entrepreneurial universities (Clark, 1998; Peterson, 1995). Overall, these studies appear to illustrate a complex interplay between internal and external forces (Smith, 1993). They demonstrate that the higher education environment differs from other organizations that are highly vulnerable to the external environment, and in which rapid change is common and centralization and high coordination are typical. Instead, homeostasis, internal moderating forces, ongoing change within a loosely coupled system, and resiliency rather than rapid, large-scale transformation are all themes reinforcing a system of midlevel environmental vulnerability (Clark, 1983a, 1993b; Smith, 1993).

Differentiation and accretion: Clark illustrates, in his review of higher education change, that institutions have responded to society and the environment by taking on additional responsibilities and functions, thereby creating new structures (1983a). This process of accretion results in continual addition onto an existing structure that usually remains unchanged, creating greater structural complexity and differentiation (Gumport, 1993). As the structure differentiates, the organization is fragmented; new pieces are not brought into any coherent, whole institution; and coordination is usually lacking. One study, for example, of the University of California system over a twenty-five-year period demonstrated the process of accretion, by which

hundreds of programs, activities, and offices have been added (Gumport and Pusser, 1999).

Loose coupling: The relationship of loose coupling and change was also probably best described by Burton Clark (1983a). Through a historical analysis of change in higher education over the last few hundred years and an examination of institutions worldwide, Clark (1976, 1983a) demonstrates that U.S. institutions have undergone tremendous change, all within loosely coupled structures that often appear disorderly, yet in the end create order. He notes how the disorder of the process leads many to not identify changes that occur within U.S. colleges and universities. The loose coupling has allowed for ongoing adaptive change; for example, adding and subtracting fields of knowledge over time.

Homeostasis: Evolutionary studies also illustrate the importance of homeostasis and the ways in which organizations naturally make adjustments to adapt to their environment (Cameron, 1991; Clark, 1983a; Sporn, 1999). Homeostasis was also a theme noted as critical to nonprofit organizations, which tend to represent long-standing social values. External determinism and radical change, advocated in some teleological traditions and even cultural approaches, are not identified as applicable within higher education (El-Khawas, 2000; Kanter, 1998). El-Khawas examined the university's perception of whether an external influence is constraining or enabling, demonstrating that complex, multiple judgements are made about the relevance of external influences. This complex process of negotiating beliefs about external influences tends to emphasize a slow, iterative, constant change, moving toward homeostasis. Clark's work on loose coupling also suggests that continuous adaptation is related to the need for homeostasis at institutions (1983a, 1996b). This suggests that measured and continuous approaches to change are probably favorable within this institutional context.

Strategic planning: Strategic planning focused on external threats and challenges has been found to be mostly unsuccessful in higher education (Birnbaum, 2000; Chaffee, 1983; Keller, 1997). For example, adaptive strategy focusing on scanning market conditions, reporting trends to authority figures, and having an external focus appears to be less successful in higher education (Chaffee, 1983). Interpretive strategy, which focuses on norms and values and the use of orienting metaphors, is more successful. In other words, exter-

nal circumstances must be translated and compared to internal norms. Rather than reacting to or changing due to the environment, employees tend to process external forces. In addition, many studies on planning conclude that it must be coupled with collegial forms of decision-making, information-sharing, and other cultural or cognitive processes in order to foster to change (Cameron and Tschichart, 1992). One major advancement in recent years has been the strength of planning models that incorporate fluid and unpredictable environments and assume a less rational approach. Strategic planning developed within the evolutionary tradition has been more successful than the deterministic and rational models of planning within the teleological tradition, which will be described on pages 107 and 110.

Competing forces: The external environment has been demonstrated to be a factor in creating change on college campuses. Several studies have examined the impact of capitalism (or market forces) on higher education institutions, particularly in reorganizing the work of faculty and resource allocation in colleges and universities worldwide (Gumport and Pusser, 1999; Rhoades, 1995; Rhoades and Slaughter 1997).

Changes noted over the past few decades are the growth of part-time faculty, the development of technology transfer units the growth of certain disciplines that can create resources for the institution and the decline of others, and moving toward a loss of community. Market forces tend to enact slow change, over time, but have been illustrated to impact institutions in profound ways (Rhoades and Slaughter, 1997). Even though change tends to be internally defined, external forces are always slowly altering the shape of the river (Gumport and Sporn, 1999). The river analogy is used to describe the way that external forces interact with these long-standing institutions. Thus, any institutional change process must contend with and reconcile changes that are already being created by the external environment.

Differential impact of environmental factors: Some scholars have illustrated that institutional type determines the type of change approach that will be efficacious. For example, Cameron (1991) suggests that adaptation models are critical for liberal arts colleges, which are more dependent on fluctuations

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and changes in the external environment—market forces related to tuition and competition, for example. Community colleges and urban institutions have been shown to be more environmentally vulnerable, given the heavy influence of local communities and boards on decision-making and resource allocation. Another example is that changes in the community, such as a depressed economy, hurt these institutions more than other types of institutions (Baldrige, Curtis, Ecker, and Riley, 1977). Evolutionary models will probably have stronger explanatory power within these two sectors in particular.

In other studies, the impact of market forces on different departments is examined in relation to university restructuring (Gumport, 1993). Departments with a greater ability to attract external resources (business or engineering) are more likely to excel than divisions (humanities or education), faculty, and programs that are less attractive to obtaining external resources (Rhoades and Slaughter, 1997). Although few studies have been conducted, they do present some of the greatest promise of this line of research, illustrating that certain sectors or units are much more vulnerable to the external environment. This also helps to predict a future in which public higher education might become influenced by these forces and provide needed data about successful responses to environmental changes (Gumport and Pusser, 1999).

Resource dependency and intentional transformation: Studies of rapid transformational change within higher education tend to document responses to extreme financial conditions, leading to retrenchment, for example (Cameron, 1983a, 1983b; Davies, 1997; St. John, 1991). Few colleges or universities undergo rapid change unless there is a crisis; most often, the crisis is financial. Occasionally, a cultural crisis may result in a rapid response or change such as an extreme act of discrimination (Kezar and Eckel, forthcoming). Recent studies of intentional transformational change in higher education illustrated relatively poor results, with only six of twenty six institutions making progress after five years (Cameron and Quinn, 1988; Kezar and Eckel, forthcoming). Of the six institutions that created transformational change, most made significantly less progress than they had targeted. These institutions faced some formidable external challenges, including legislatures that were critical of higher education, performance indicators, reductions in funding, enrollment declines, and poor accreditation reports, but these did not pose strong enough

threats to foster second-order change. Without extreme external circumstance, especially financial challenges, the change process tends to be slow and adaptive (Kezar and Eckel, forthcoming).

Moderating forces to the external environment: Some studies have illustrated that the external environment is less significant on college campuses than within other sectors. Studies using the sensemaking (social-cognition) lens have demonstrated that organizational participants tend to interpret external environments through internal mechanisms. The external environment is clearly influential, but organizational sensemaking creates a context for interpreting the external environment (Gioia and Thomas, 1996). For example, if resources are constrained in the external environment, administrators will interpret this change and its implication through their view of the identity and image of the institution. If they feel it is a top institution, then they feel no threat, even though the real situation of constraint exists. Sporn (1999) found that adaptation may be triggered by external demands, but they are defined internally as a crisis or opportunity by the institution.

One study examined utilitarian (institutional actions and decisions aim at dealing with a competitive environment) versus normative (de-emphasizes external market orientation) identities (Smart, Kuh, and Tierney, 1997). Fewer institutions perceived themselves as utilitarian; many more saw themselves as normative, reinforcing the finding that change appears to be mostly influenced by internal, not external, factors. Smart and St. John (1996) also conducted a study that illustrated essentially the same findings: that institutions are typically normative in orientation. Their findings also suggested that a nonmarket orientation made an institution more effective than a market or external orientation. Market-oriented campuses lost sight of their mission, created unstable environments, and negatively affected personnel. These studies reinforce the earlier evolutionary themes: the external environment can be a catalyst for change, but the internal environment appears to temper this, perhaps working toward homeostasis, which appears healthier for these institutions.

Responsive and entrepreneurial institutions: There is a long line of research that tries to illustrate that colleges and universities are adaptable (or should be adaptable) to the environment (Sporn, 1999). The newest incarnation of these ideas is the notion of the entrepreneurial or responsive university. Clark's

recent study (1998) examines institutions that are responsive to the external environment, studying what characteristics allow this interactivity. The model assumes that an externally oriented mission is positive. Some of the principles characterizing an entrepreneurial university are new organizational values and ideas that are strongly interconnected to the structure, academic departments fusing new administrative capabilities, contract education and consultancy, outreach administrative units promoting contract research, and diversifying income (Clark, 1998). Peterson proposes four processes for achieving the status of a responsive university: redefine the university's nature and industry, redirect external relationships and missions, reorganize processes and structure, and reform university culture (Sporn, 1999). Both entrepreneurial and responsive models suggest that being externally oriented is critical to some campuses' mission and provide ways to maximize an external orientation. Even though there has been minimal research on responsive or entrepreneurial universities, they are becoming increasingly prominent in the literature. They are an extension of a long line of idealized models that attempt to provide direction for higher education as it tries to balance internal and external claims in the change process (Keith, 1998).

Teleological

Teleological models have had mixed results in terms of helping to explain change in higher education. Certain concepts have been successful, such as creating a vision or planning. However, many of the specific models, such as TQM or reengineering, have been applied with limited success, especially to changes in the core of the institution—among the teaching and learning processes (Birnbaum, 2000). Birnbaum (2000) and Bess (1999) offer a host of reasons for poor results, including the inability to clearly state the missions and goals of institutions, unique planning problems, lack of centralized decision-making, short-term orientation of teleological models, or the inertia of long-standing structures. Furthermore, ambiguity—noted above as one of the fundamental characteristics of colleges and universities—suggests that planned change models, with their emphasis on rationality, linearity, and clarity of process, are unlikely to be successful within the higher education system. Perhaps not surprisingly, the teleological model that has been applied most in higher

education—total quality management—advocates a more collective and consensual process. Within certain units on college campuses that operate under a more businesslike approach, teleological models have been effective (Eckel, Hill, Green, and Mallon, 1999).

There is a tremendous amount of advocacy literature claiming that these models—especially organizational development, rational planning, TQM, reengineering, and restructuring—have been successful for individual institutions (Alfred and Carter, 1996; Balderston, 1995; Benjamin and Carroll, 1996; Dominick, 1990; Elton and Cryer, 1994; Farmer, 1990; Morris, 1994; Nevis, Lancourt, and Vassallo, 1996; Norris and Morrison, 1997; Slowey, 1995). Advocates of teleological models tend to recommend a particular change such as a focus on customers or efficiency. Little of this literature actually studies change processes to identify how it occurs; rather, the authors advocate that change should occur within these models and then study institutions that have chosen to implement these approaches (Levin, 1998a; Meyerson, 1998; Slowey, 1995). More empirical research studies are needed to demonstrate the viability and usability of these models.

The themes that emerge related to teleological models are mission, vision, strategic planning, focus on leadership, incentives, interrelationship among strategies, narrower efficiency and cost emphasis, and limited success of models. The core lessons from teleological models are so ingrained in administrative thinking that we might often forget that these ideas have not always existed to guide change processes; for example, rethinking the mission and tying institutional incentives to mission (Eckel, Hill, and Green, 1998; Lindquist, 1978); establishing a planning process with specific goals (Keller, 1983); strategic planning processes that not only ensure that planning processes are tied to the mission, but also take into account environmental factors (Keller, 1983); and establishing a vision to serve as a guide for change processes (Eckel, Hill, Green, and Mallon, 1999). These concepts are described below.

Mission and objectives: Having discussions related to mission has been found to be effective in facilitating a change process, especially at the beginning (Dominick, 1990; Eckel, Hill, Green, and Mallon, 1999; Lindquist, 1978; Nordvall, 1982). Several teleological change models emphasize the importance of mission, including organizational development and rational planning

models. Lindquist's work suggests that the evolution of the change vision should be strongly tied to the mission (1978). The mission also ties naturally (or should) to any strategic planning efforts. Management by objectives (MBO) was a major strategy advocated for creating change that focused on the missions and goals of organizations. By clearly delineating the objectives of the organization and communicating these objectives to employees, the manager could create needed change (Nordvall, 1982). Although an important principle, colleges often find it difficult to develop a mission and set of objectives that are shared by people throughout the campus (Birnbaum, 2000).

Vision: Probably the most commonly described strategy within change is a motivating vision; it is also highly interrelated with other organizational activities such as planning, institutional communication, leadership, reward structures, and hiring processes. Vision has been identified as central to both

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implementing and accomplishing change (Kaiser and Kaiser, 1994; Kerr, 1984; Mathews, 1990; St. John, 1991). The literature identifies why vision is so critical: change often invites risk and an uncertain future or destination, so having a compelling reason is crucial. A motivating vision can become the blueprint or compass for many employees, allowing them to move toward something new and unknown. Attempts to develop a truly shared vision for an entire institution with such different values, with ambiguity about goals, and a loose structure have proven to be unsuccessful in many cases (Chaffee, 1983).

Strategic planning: Tied closely to the notion of mission, objectives, and vision is strategic planning, which has also been found to create change on college campuses (Cameron and Quinn, 1988; Daoud, 1996; Kezar, 2000a; Meyerson, 1998; Norris and Morrison, 1997). As noted in the section on evolutionary models, planning models have been proven to be successful in providing some structure to the change process, and are shown to be most successful when coupled with other cultural and/or interactive strategies (Eckel, Hill, Green, and Mallon, 1999; Nordvall, 1982; Peterson, 1997; Taylor and Karr, 1999). Several authors have critiqued traditional strategic planning,

debunking it as a linear process, questioning its predictability, and dispelling its efficacy and rational approach (Mintzberg, 1994). For example, one study found no significant differences between the fiscal conditions of institutions before and after planning began, between planners and nonplanners, or between minimal and intensive planners. On average, more positive (though not statistically significant) change in fiscal condition was experienced by the nonplanning institutions (Swenk, 1998). Although some studies have found that strategic planning efforts fall short and do not always create change, some campuses are successful in using planning for change; thus, there are mixed results (Taylor and Karr, 1999).

Focus on leadership: It is widely acknowledged in the literature on change that support from the president and other individuals with positional power promotes the change process because they can secure human and financial resources and focus institutional priorities (Cowan, 1993; Farmer, 1990; Kerr and Gade, 1986; Lindquist, 1978; Lovett, 1993). Although grassroots change can occur, especially on campuses with strong faculty or student groups, these change efforts can be met with resistance if there is not buy-in from those with positional power (Kerr, 1984). Even though colleges and universities have been described as organized anarchies (Cohen and March, 1991a) where change can happen haphazardly without leaders (or often not at all), several studies have illustrated that change was facilitated through the support of individuals in positions of power (Birnbaum, 1991a; Eckel, Hill, Green, and Mallon, 1999; Kerr, 1984).

Within the past ten years, a willing president or strong leadership seems to be waning in importance compared with organizing collaborative leadership (Clark, 1996a; Cowan, 1993; Curry, 1992; Bensimon and Neumann, 1993; Lindquist, 1978; London, 1995). Collaboration typically involves stakeholders throughout the organization in aspects of the change process, tying into the shared governance structure and work of committees. The optimal degree of collaboration necessary for facilitating change is unknown. Sometimes collaboration entails vision-setting; other times, collaboration means allowing people voice, but no real authority over direction, goals, or process. However, some studies have found that campuses become embroiled in discussions around vision-setting and never get to implementation (Birnbaum, 2000). Although not clearly understood, collaboration's impact on change appears

to be significant in terms of commitment, empowerment, engagement of individuals with thorough knowledge of the institution, and development of momentum (Gardenswartz and Rowe, 1994; Kotter, 1996).

Incentives: Rewards or incentives have been identified in many different studies as ways to encourage employees to channel efforts from existing activities to new or additional activities (Eckel, Hill, Green, and Mallon, 1999; Mathews, 1990; Roberts, Wergin, and Adam, 1993; Tierney and Rhoades, 1993). The range of incentives may include computer upgrades, summer salaries, merit increases, conference travel money, and public recognition and awards (Eckel, Hill, Green, and Mallon, 1999). Although a motivating vision or mission provides people with a compelling reason to engage the change process, incentives can provide vehicles for continuing or enabling change. For example, employees might want to be part of the change process, but need new skills. Enabling them to attend a conference on assessment might be the necessary incentive to have them be able to facilitate change (McMahon and Caret, 1997). However, many studies also show that faculty are generally not motivated by external rewards, and most change is thus the result of internal motivators (Bess, 1999; Blackburn and Lawrence, 1995). So the extent to which incentives create change among faculty and professional staff is not clearly understood.

Interrelationship among change strategies: Recent studies have illustrated the connection and interrelationship among change strategies (Kezar and Eckel, forthcoming). Much of the early, nonresearch-based literature presents change strategies as isolated actions (rather than linked or bundled) and occurring linearly, not viewed systematically (Cowan, 1993; Kaiser and Kaiser, 1994; Roberts, Wergin, and Adam, 1993; Taylor and Koch, 1996). For example, it is advised to first develop a vision, then to communicate the vision, obtain buy-in, and to develop an implementation plan. Findings within newer studies illustrate that strategies happened simultaneously and in support of each other (Birnbaum, 2000; Kezar and Eckel, forthcoming). Taking action helps to build collaborative leadership, while senior administrative support enhances collaborative leadership. Realizing that strategies are interconnected and nonlinear increases institutions' success in the change process (Kezar and Eckel, forthcoming).

Narrower efficiency and cost emphasis: Many of the recent teleological change models have had a strong orientation toward efficiency and cost

containment. Restructuring, business process reengineering, and outsourcing are examples of three recent change models that focus specifically on ways to restructure operations in order to achieve cost efficiencies (Burton, 1993; Kezar, 2000a). The main techniques used include downsizing the number of employees, streamlining processes, and rethinking the ways that systems operate. It is not surprising that these models emerged in a time of economic challenge and greater international competition. Within these models, change is characterized as a necessary reaction to external threats and to increased competition. Some commentators note that teleological models of change may be dangerous to the overall system, hurting its long-term response, as they move higher education toward an efficiency model that alters goals and professorial autonomy (Bess, 1999; Birnbaum, 2000). Long-standing institutions can damage their roles in and contributions to society by reacting to short-term market conditions.

Limited success in facilitating change: Several different studies have found that TQM has failed based on its inability to incorporate academic values (Birnbaum, 2000; Freed, Klugman, and Fife, 1997). Other studies of strategic choice found that institutions that utilized this approach for planning change of financial resources were worse off than institutions that did not use the model (Kezar, 2000a). Also, in Gioia and Thomas' study (1996), the ambiguity of goals made strategic planning and decisions related to change mostly useless and political sensitivities much more important. The unique characteristics of higher education are in conflict with the assumptions of teleological models, which assume a clear vision, unambiguous plans, a decision-making chain of command, clear delegation of responsibility, decisions based on facts, and rationality (Benjamin and Carroll, 1996; MacTaggart, 1996).

Studies need to examine the application of teleological models to understand why they do not work as well as intended. Perhaps through an analysis of institutions struggling to adopt models that do not succeed, research can develop more applicable teleological change models. For example, studies of strategic planning have found that when coupled with cultural change approaches, such as using metaphors to connect the plan to the history and traditions of the institution, it can be successful (Chaffee, 1983).

Life Cycle

There have been virtually no studies of life cycle or developmental change within higher education, making it difficult to assess the viability of these models. Cameron and Whetten (1983) suggest a model of the relationship between organizational life cycle and institutional adaptation, focusing on how institutions will respond uniquely, depending on their life stage; this model still needs to be tested. Change processes may occur uniquely depending on the organizational life cycle of a college or university. Levine (1998) suggests that higher education institutions are a mature industry; this means that change is likely to occur uniquely, based on the stage of organizational life cycles within which it occurs. As mentioned in article three, in a mature industry, change tends to be slower and less radical, whereas change in a young organization tends to be rapid. Levine does not provide empirical proof, and no one has studied this issue. Research studying different life spans of varying institutional types, such as community colleges versus state colleges or liberal arts colleges, is an important future direction. Institutions that have been around for varied lengths of time might be compared. A few researchers have studied organizational decline, particularly in the late 1970s when some higher education institutions were experiencing severe retrenchment (Cameron and Whetten, 1983; Goodman, 1982; St. John, 1991). These studies help to understand factors causing stress and crisis among institutions and have developed institutional indicators of danger, such as overexpansion during good times, but have done little to further our understanding of the change process.

There has also been limited research about developmental models. One study examined the change process as akin to identity development, paralleling psychological theories of image formation (Gioia and Thomas, 1996). It was postulated that successful organizational change is a reflection of facilitating the individual's change in his or her image. Alteration in identity development or image was found to be closely associated with the language of change, reasons for change, and outcomes of change processes. Higher education institutions have distinctly human-oriented characteristics: community is often centermost, the services provided are teaching and learning, and the client often stays on the campus as part of the community. This human focus makes the

importance of identity more apparent. Identity involves a long-term, complex kind of change. Life-cycle models may help us to better understand how to facilitate this type of change because they assume that buy-in, support, and training are probably key to long-term developmental processes. One cautionary note in studies of change is that senior administrators in higher education tend to assume that identities are somewhat fluid, more so than most theories of identity would allow (Gioia and Thomas, 1996). Because identity appears to be so important to the higher education enterprise, these models may provide some useful explanatory power.

A few studies found individual motivations, attitudes, feelings, and behaviors as the key factors facilitating or hindering change (Aune, 1995; Austin, 1997; Farmer, 1990; Nedwek, 1998; Neumann, 1993). Unfortunately, this is an area with few empirical studies—mostly anecdotes from campus leaders—so it is hard to draw conclusions. It also seems significant that almost every anecdotal report notes that institutional change is dependent on individual transformation and growth, often through staff development. The findings of life-cycle theories relate to the concept of learning organizations in which the critical element of change is learning or development among individuals within the organization. Life-cycle and developmental models remain an important area for future research.

Dialectical

Over the past three decades, several dialectical change models have emerged in higher education. These models appear to have strong explanatory power for understanding the way change occurs in higher education. In addition, they help to demonstrate strategies for effectively facilitating change. Some key findings include (1) the importance of interest groups and power within colleges and universities for creating change; (2) persuasion and influence strategies; (3) the significance of informal processes within change, such as behind-the-scenes conversations and deal-making; (4) the efficacy of persistence; (5) the role of mediation; and (6) the manner in which politics prevents change.

Many of the key findings related to dialectical models were found by authors studying other theories. These researchers were struck by the level of

coalition-building, interest groups, negotiation, and informal processes. These findings were especially compelling, because people who were trying to illustrate the power of paradigms, culture, the environment, or planning concluded, at times to their dismay, that political processes created change (Gioia and Thomas, 1996; Simsek and Louis, 1994). This should not be surprising given the analysis of higher education organizations offered in article four; as Burton Clark noted, “the many offices, divisions, and schools, protect specialized interests as do the many chairs, departments and faculties in the field” (Clark, 1983a, p. 214).

Some researchers criticize political models’ relevance to all institutional types in higher education, suggesting that smaller institutions may have less political environments. Others note that many of the studies that identified political forces were developed in the 1960s and 1970s, a time when the country, and higher education itself, was more politicized (Baldrige, Curtis, Ecker, and Riley, 1977; Gumpert and Pusser, 1999). Yet political models have been shown to be just as relevant within today’s university (Hearn, 1996; Sporn, 1999). Hearn noted that most studies of change (or of higher education organizations in general) identify staking out positions, forming interest groups, establishing alliances and coalitions, putting the right spin on issues, and manipulating symbols as characteristics of the higher education organizational setting and the change process. Even Simsek and Louis (1994), who studied paradigm shifts and examined change through a cultural approach, found coalition-building on the part of university leaders as one of the most prominent aspects leading to and characterizing change.

Interest groups and power: A specific dialectical model of change was developed for higher education by Clifton Conrad (1978) in a qualitative, grounded theory examination of a number of institutions engaged in change. He found that change occurred based on the interest and goals of powerful groups. The study found conflict existing within all college environments studied; conflict translated into pressure for change. Conflict is heightened by the clash of different interest groups, then is transformed into policy that reflects the powerful interest group. Gioia and Thomas (1996) examined strategic change in academia, also through a grounded theory approach, and determined that political issues were central to the change process. Conflict, interest groups

and factions, competing interests, difficulty in discussing resources, and especially differential allocation were noted as catalysts for change.

Burton Clark (1983a) suggested that political processes were at the heart of change in academic institutions. Institutions change as a result of the self-interest of individuals and groups around differentiated specialties and the organizational parts that support and carry them. Clark saw this process as tied to the splintering of knowledge, creating more interest groups and resulting in new academic structures such as additional departments. Yet existing groups defend the resources and power they already have, creating conflict. The following quote illustrates the way interest groups and power have been represented in higher education institutions:

We depict the situation as a seesaw, a long board on which reform-supporting and reform-opposing groups sit at different points in relation to the center of balance, far out toward the end or close to the center according to the extremity of their views. If all groups were equal power, the seesaw's direction would depend on how many groups were located on either side of the balance, and particularly the intensity of their commitment. But some groups are genuine heavies in terms of power whereas others are lightweight. . . . When the (heavies) assert themselves, they can throw the weaker innovative groups off the seesaw, leaving them dangling uncomfortably in midair, or force them to declare that the game is over [Clark, 1983a, pp. 225–226].

More recently, political studies of change examine the growing separation between administrators and faculty; administrators are focused on reorganizing faculty work and roles, creating more tension and deeper divisions among interest groups (Gumport and Pusser, 1999; Rhoades, 1998). Several studies have noted the growing managerialism and collective bargaining and power struggle emerging between the faculty and administrative ranks. Higher education appears to be in a period of growing conflict and interest-group mentality. Power has been illustrated to be a major driving force among interest groups as well as a major catalyst for (or against) change on college

campuses (Baldrige and Deal, 1983; Clark, 1983a; Conrad, 1978). As noted in the section on the distinctive characteristics of colleges and universities, power is highly diffused within this environment; this means change occurs at many different levels and is more likely to be decentralized.

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Persuasion and influence: As a result of diffuse power, persuasion and influence have been found to be important to creating change. In many organizations with centralized authority, power is usually in the hands of those in formal positions of authority. Since colleges do not operate in this manner, persuasion and influence are main tactics for asserting power. Baldrige, Curtis, Ecker, and Riley's (1977); Conrad's (1978); Clark's (1983a); and Gioia and Thomas' (1996) studies found that interest groups are

motivated primarily by protecting their resources, structures, and other aspects they see as fundamental to their existence, and that their main tactics for protecting their interests include persuasion and influence. Studies have identified forms of persuasion associated with creating change specific to higher education. These tactics differ from those of other organizations and focus on three main types: manipulation of symbols or meaning, one-on-one informal communication, and appeals to expertise (Conrad, 1978; Childers, 1981; Walker, 1979). An example of manipulation of symbols is for a department chair to invoke the school logo and theme to obtain support for an initiative. One-on-one informal communication will be described in detail later. An appeal to expertise would be to suggest a curricular modification and then to describe how a disciplinary society supports this type of change.

Coalition-building: Many studies of change have found that coalition- or alliance-building is an effective means for bringing together interest groups and creating a power base (Baldrige, Curtis, Ecker, and Riley, 1977). Because of the high degree of ambiguity on campuses and the diffuse power base, strategies for creating change tend to be highly visible and include a large number of people, especially influential individuals. Influential people are defined differently on each campus, but examples include people with seniority, people who have a reputation for fairness, people who bring in large number of

resources, and individuals with external prestige. Coalition-building also represents a strategical way to bring people together on a temporary basis, with little extra effort, as no new offices, structures, or resources are needed to develop a coalition or alliance. Coalition-building has been found to be one of the most effective strategies for creating change (Baldrige, Curtis, Ecker, and Riley, 1977).

Informal processes: Influence or power exerted through informal groups, processes, and committees has been illustrated to have a significant impact on change (Baldrige, Curtis, Ecker, and Riley, 1977; Gioia and Thomas, 1996). Informal processes are difficult to study, but each study of change through a political lens have found that informal discussions, one-on-one deal-making, or hallway negotiations are often among the most effective strategies for creating change, especially rapid change (Hearn, 1996). An example of an informal process might help make this finding more understandable. Two administrators, anytime they ran into colleagues, delivered the same message about the importance of peer evaluation of teaching. It was never the main topic of conversation, but was dropped into discussion casually each time. Over the year, the school began to see profound changes from this informal process of persuasion. This area needs further study; the findings are mostly suggestive, or the studies are unable to really judge the effectiveness of this process relative to others in the study of change. Related to the importance of informal processes was the notion of persistence—that is, people who are willing to work behind the scenes for long periods of time.

Persistence: Because higher education institutions are ambiguous and complex environments, they are vulnerable to people who will spend time, be persistent, and advocate for a change, since most short-term efforts tend to get lost in the system (Baldrige, Curtis, Ecker, and Riley, 1977; Cohen and March, 1991a; Hearn, 1996). Hearn notes that “those that are vocal, willing to attend regular committee meetings, willing to take on seemingly mundane tasks, and willing to meet with administrative leaders can achieve far greater effectiveness” (1996, p. 146). All the studies of change through a political framework discovered that individuals, groups, or coalitions that continuously brought up an idea and provided ways to implement it were the most likely to make change occur.

Mediation: Another strategy that is often used to create change among the interest groups, conflict, and power is mediation (Baldrige, Curtis, Ecker, and Riley, 1977; Baldrige and Deal, 1983). Administrative leadership often acts as a mediator, brokering various competing claims (Conrad, 1978). Mediation appears to happen at levels throughout the institution, among individual faculty, departments, schools, and groups within the university. Collective bargaining is an example of a mediation process among faculty and administrators. Several studies have suggested that higher education institutions need better mechanisms of mediation or negotiation, especially because power is so diffuse; there are often limited ways to weigh various claims or rights. Others fear that this will be another factor eroding community on campus. Both Clark (1983a) and Conrad (1978) found that mediation needs to be better understood as a facilitator of change.

Preventing action: Political processes were noted as preventing strategic action and possibly subverting change processes (Gioia and Thomas, 1996). If issues were labeled as political—such as student involvement in governance, diversity, or administrative structural changes—then there was limited or no activity on these items. Gioia and Thomas noted that political issues are important because they point to previously overlooked strategic possibilities and untenable political states that might be left alone. Political processes appear to stifle as well as to create change (Clark, 1983a; Cohen and March, 1991a; Conrad, 1978). However, the finding that certain issues are identified as political and then not acted upon is insightful as to why some changes proceed more quickly than others. It also helps campuses to know what change initiatives might be mired in difficulties and to try to create strategies to address campus discomfort. Many campuses, for example, struggle to institutionalize diversity; the finding that diversity is considered a political issue and that cannot be easily addressed might help develop an awareness that can break the tension.

Many administrators may be quick to resonate with this last finding that political processes deter change and diminish planning efforts or strategy. However, what these findings make clear is that political processes are extremely effective in creating change. In addition, these strategies may be more likely to create change quickly through informal processes (Hearn, 1996).

Social Cognition

Use of social-cognition models, especially models of learning organizations, is growing among scholars within the higher education literature. An appeal of these models is that they accommodate the ambiguous environment of higher education. For example, social-cognition models tend to emphasize discussion and learning among institutional participants, helping them to understand the change process. These models illustrate that campus employees need to understand what the proposed change is, and that the individuals proposing the change need to further appreciate what the change means for the complex organization. This process of discussion, debate, reframing, and sensemaking is seen as inherent within an ambiguous system and allows for creative outputs to occur (Weick, 1995).

Cognitive reorientation is important to the change process in the following ways: single- and double-loop learning, mental models, constructed interaction, learning organizations, metaphors and language, sensemaking, image, and institutional isomorphism and imitation or emulation. There are two distinct approaches within the social-cognition tradition. Sensemaking, organizational learning, and reframing focus on the importance of meaning construction and making the change initiative meaningful at an individual level. The second major approach is institutional isomorphism, focusing on the way norms and image guide the change process through imitation and emulation. In general, studies within the social-cognition tradition have found the internal environment to be more significant to change than the external forces, with the exception of studies of institutional isomorphism (Weick, 1995).

Single-loop and double-loop learning: Several studies within the cognitive perspective suggest that change in higher education institutions occurs through and can be facilitated by learning (Houghton and Jurick, 1995; Weick, 1991, 1995). Social-cognition theorists have studied two different types of learning: single-loop and double-loop learning. In loosely coupled systems such as colleges and universities, single-loop learning occurs on an ongoing basis (Weick, 1991, 1995). Innovation and change are occurring within departments all the time without transforming the overall system or questioning its governing rules. In addition, innovation can and usually does happen swiftly within

local environments, not requiring the massive effort of change throughout the system. Faculty respond to local threats and opportunities resulting from changes in the community, their fields, or departments. However, many changes reach a level at which, if they are to be further diffused, double-loop learning must occur (see pages 44–99 for a description of single- and double-loop learning). The inherent ambiguity of the system makes double-loop learning complex. This is where there is a gap in the literature: What are the best strategies for creating double-loop learning in higher education? Some of the literature suggests that we need to explore our mental models to become learning organizations, which will be discussed next (Senge, 1990).

Mental models: Argyris (1982) and Weick (1991) were among the first to examine cognition and change in higher education institutions, focusing on learning. Soon the notion of learning began to expand into the notion of mental models or cognitive frameworks that shape and frame behavior. Mental models are internal images, assumptions, and stories of how the world works; as Senge notes, “they limit us to familiar ways of thinking and acting” (Senge, 1990, p. 174). The notion of mental models emerged from studies of why organizations (and at times people) were unable to change. In periods of change, new cognitive frameworks (or mental models) are introduced, explored, modified, and adopted (Kezar and Eckel, forthcoming; Mellow, 1996). Leaders are asked to examine their own mental models as they initiate and implement change processes. The difficulty for organizations and leaders is to make employees aware of mental models that will affect their ability to change their behavior (Nedwek, 1998). In other words, obtaining ownership of a vision and communicating it will not be enough to create change, because internal mental models need to be surfaced, examined, and altered (Kezar and Eckel, forthcoming; Senge, 1990). Yet implications are tentative, as there has been little empirical research of this concept in higher education.

Constructed interaction: The notion of mental models is tied closely to constructed interaction. Several studies have begun to examine the role of social interaction for understanding change (Austin, 1997; Gioia and Thomas, 1996; Kezar and Eckel, forthcoming; Weick, 1995). One study of change processes among academic administration surveyed 439 higher education institutions and found that key sensemaking strategies included committees,

campus dialogues, reading groups, staff development, and “town hall” meetings (Gioia and Thomas, 1996). These strategies provide opportunities for institutional participants to make new meaning—to help members of the institution change how they perceive their roles, skills, and approaches or philosophies. These studies illustrate that a central component of change is providing vehicles for people to alter their mental models, leading to new meanings and activities.

One approach for fostering constructed interaction uses reading groups or professional seminars. The goal of reading groups is to explore a topic in depth and provide campuses with a common language and knowledge base about a particular issue, such as faculty workload, community-service learning, or campus learning communities (Eckel, Kezar, and Lieberman, 2000). Creating a campus reading group is an intentional strategy to manage the breadth of information, master important knowledge, and involve key people (Eckel, Kezar, and Lieberman, 2000; Kezar, 2000b). Reading groups build on highly developed academic strengths, such as inquiry, focused thought, writing, and contemplation, to advance institutional goals. They complement shared governance; highlight specific elements in ambiguous contexts; uncover institutional assumptions, perspectives, priorities, and biases; and allow people to become aware of differing interpretations of events (Kezar, 2000b; Bensimon and Neumann, 1993; Birnbaum, 1991).

Learning organizations: The work of Argyris (1994), Senge (1990), and Weick (1995) related to learning within organizations and mental models has led to the concept of the learning organization. Several higher education writers advocate the development of learning organizations to create change; however, there has been minimal empirical research, mainly because few universities are learning organizations (Brown, 1997; Brunner, 1997; Kliwer, 1999; Lyons, 1999; Rieley, 1997). One study suggested that one of five main strategies to create transformational change is ongoing staff development, which could be an aspect of a learning organization (Kezar and Eckel, forthcoming). There needs to be more research on institutions that directly link individual and organizational performance, as Senge suggests (Kerka, 1995). Also, because this is mostly a philosophical change by individuals, it is difficult to examine empirically. This remains an idealized model for guiding the change

process, rather than a way to understand how change is occurring in higher education.

Metaphors and language: Enabling metaphors and language have been a major trend in the literature on change in the past decade (Kelly, 1998). Bolman and Deal's work on reframing organizations (1991) describes the leader's role as helping organizational participants to understand needed changes through the use of stories or metaphors. Leaders are encouraged to frame issues in different ways so that organizational participants begin to understand the direction in which the institution is heading (see page 53 for further discussion of Bolman and Deal's *Reframing Organizations*, 1991). A recent study of change illustrated that institutional metaphors served as maps for institutional actions and that these maps could be reoriented to create change (Simsek, 1997). Metaphors are also often tied to the image of the organization; thus, they become connected to institutional identity, providing fairly lasting perspectives. Dissemination of metaphors occurs through the social matrix all the time, and there is the possibility that dialogue and interaction will alter images throughout the organization. An example of this process is a provost talking about a research initiative that is undergoing a change. She may note how the previous image was a flowering plant, then replace this metaphor with that of a rocket, because she wants to alter peoples' perceptions of the project as being in a more progressive phase.

Sensemaking: Sensemaking is a bit broader than Bolman and Deal's reframing concept (1991), which is dependent on an individual; in contrast, sensemaking occurs through many different processes and individuals, socially constructing reality together. It is the reciprocal process by which people seek information, assign it meaning, and act (Thomas, Clark, and Gioia, 1993). It is the collective process of making meaningful sense out of uncertain and ambiguous organizational situations (March, 1994b; Weick, 1995). Sensemaking allows people to craft, understand, and accept new conceptualizations of the organization (Smirich, 1983), then to act in ways consistent with those new interpretations and perceptions (Gioia, Thomas, Clark, and Chittipeddi, 1996; Weick, 1979).

Eckel and Kezar's forthcoming study of sensemaking among twenty-six institutions engaged in change processes presents six core sensemaking

strategies: (1) numerous, continuous, and widespread structured conversations; (2) use of cross-departmental teams; (3) faculty and staff training; (4) outside individuals or consultants providing ideas; (5) documenting concrete sets of ideas; and (6) public speeches. Structured conversations allowed people to construct new identities collaboratively and openly. Cross-departmental teams led to discussions about beliefs, assumptions, and ideas, because people typically work in silos and are not asked about why they hold particular beliefs. Training brought people together in a social way to learn new skills and meanings about the change process. Outsiders challenged institutional beliefs and assumptions, and allowed for the adoption of ideas from outside that were modified to align with internal values. The creation of documents forced people to talk about assumptions and tended to challenge institutional identity. Last, speaking publicly articulated the institution's identity and how it was shifting.

Another study, by Gioia, Thomas, Clark, and Chittipeddi (1996), reinforces Eckel and Kezar's findings. The tradition of establishing task forces and committees, so common in the change process within higher education, is shown to be a sensemaking process. Committees are an attempt by a set of influential individuals to create metaphors, language, and concepts around the change initiative that could be reframed and retranslated to others. These groups were seen as typically advancing through four different stages: (1) interpretation (attempts by the committee to construct an identity for itself and to interpret the change); (2) definition (floundering, realizing that they are a symbolic tool for the central administration, examination of not taking certain actions, defining themselves only as a launching pad); (3) legitimization (determining how they can exert influence and how much they want to exert, change is starting to become their own vision); and (4) institutionalization (constructing influential statement or recommendations, usually attaching ownership to vision, wanting to develop some level of permanency) (Gioia, Thomas, Clark, and Chittipeddi, 1996). This study shows how institutional processes and structures, such as committees, reorient key individuals' perspectives and commitment in an effort to effect a broader change within the organization.

Image: Image emerged as a key motivator within the change process because the products and services of higher education institutions are mostly intangible. Image was particularly strong among individuals involved in change

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decision processes. It is suggested that providing “a compelling future image that people can associate with and commit to eases the launching and eventual institutionalizing of strategic change” (Gioia and Thomas, 1996, p. 398). In some studies, image replaced the notion of vision because people could gravitate toward a certain image, a human-oriented term, more than toward some abstract vision (Gioia and Thomas, 1996). Image is also used with alumni to achieve needed resources for change; this group must also buy into the new image and identity, adopting it as their own. This is not surprising, given the

attention to image within higher education institutions as a result of their lack of bottom-line goals. Reputation, prestige, status, impression, stature, and visibility were critical concept in facilitating change (Gioia and Thomas, 1996).

Institutional isomorphism, imitation, and emulation: Institutional theory suggests that there are templates for organizing institutions that are implicitly understood and translated to new employees; these templates are interpretive schema, underlying values and assumptions, similar to mental models (DiMaggio and Powell, 1983; Greenwood and Hinings, 2000; Meek, 1990; Scott, 1995). Again, like mental models, templates of institutional behavior create resistance to change. Change processes are identified as means for reinstitutionalizing, altering the dominant belief system. Reinstitutionalization occurs by establishing new normative structures, a process that has been hypothesized to vary in length of time based on factors such as the degree of normative embeddedness, degree of loose or tight coupling, permeability of organization, institutional commitment, competitive or reform environment, degree of enabling pattern, and capacity for action (Greenwood and Hinings, 2000). Because higher education institutions are loosely coupled, have normative embeddedness and high institutional commitment, and generally lack environmental vulnerability, change—especially radical change—is less likely.

One concept within institutional theory that has regularly been applied to higher education institutions to explain change is institutional isomorphism (DiMaggio and Powell, 1983; Gates, 1997; Greenwood and Hinings, 2000).

This concept suggests that institutions do not change as a result of a competitive market, external pressures, or efficiency, but rather through the force of homogenization, striving to be like other types of colleges perceived to be elite (Sporn, 1999). Although various forces move organizations toward homogenization, professionalism or normative forces are seen as critical within higher education (Greenwood and Hinings, 2000). Institutional isomorphism occurs as a means to gain legitimacy and increase survival. Institutions tend *not* to be distinctive in their identity development or image, but to emulate an elite group and institutions they perceive as having the appropriate image or reputation (Gioia and Thomas, 1996). Many different studies have documented how institutions imitate a group of institutions that they consider to be prestigious (research universities) or that are most appropriately conducting a process such as cost containment or exemplary teaching (Gioia and Thomas, 1996; Meek, 1990, 1991; Morphey, 1997). New institutionalism focuses more on interpretation, adoption, and rejection by the individual organization of change ideas, whereas old institutionalism focused more on external factors of legitimacy and less on the internal negotiation process (Czarniawska and Sevón, 1996; Greenwood and Hinings, 2000).

Cultural

Research on higher education change demonstrates the efficacy of cultural models for understanding the change process. However, more research is clearly needed in this area, as many questions remain unanswered and its potential for illuminating the change process is only partly fulfilled. In applying cultural models to higher education, several themes emerged that help to understand this process: the role of history and tradition, symbolism as a strategy to create change, institutional culture affecting the change process, deep transformation and paradigm shifts as uncommon, irrationality and ambiguity as characteristic of the process, and lack of interpretive power of the notion of a culture of change.

Institutional history and traditions: Almost all studies of change in higher education have found institutional history and tradition to heavily influence institutional practices and philosophy and to shape or restrict change (Benjamin, 1996; Birnbaum, 1991a, 1991b; Clark, 1983a, 1983b; Cohen and

March, 1991a, 1991b; Gioia and Thomas, 1996). In Cohen and March's (1974) classic text on leadership and decision-making within an organized anarchy, academic traditions and history, in addition to the ambiguous goals and centralized structure, resulted in leaders having little "direct" influence on change. Several studies of change have illustrated how the campus history and traditions have thwarted change efforts (Clark, 1991a; Kelly, 1998; Miller, 1995). In a few studies, strategic campuses have worked within the history or utilized the traditions to facilitate change (Kezar and Eckel, forthcoming). The implication for the change process in higher education is that the institutional history and traditions need to be understood by change agents and incorporated into the planning process. An awareness of history and traditions can also help to set realistic parameters related to change, as repeated failed efforts to change result in cynicism among employees (Birnbaum, 2000).

Symbolism: Cohen and March (1974) were among the first to point out the importance of symbolism within the college and university change process; this strategy was a reaction to the ambiguous environment of an organized anarchy. As Bolman and Deal note, "faced with uncertainty and ambiguity, human beings create symbols to resolve confusion, increase predictability, and provide direction" (1991, p. 244). Leaders could invoke symbolism to create meaning for people within their environments, often drawing on or relating to the history and tradition of the institution (Clark, 1991b; Dill, 1982; Tierney, 1988). In more recent studies, it is also noted that symbolism can be invoked for creating change (Gioia, Thomas, Clark, and Chittipeddi, 1996). Symbolism is strongly related to change in Chaffee's (1983) research on interpretive strategy, Bolman and Deal's (1991) reframing organizations, and Neumann's (1993) cultural change. These authors discovered that symbolic events could be used as levers for creating change in higher education. Similar to the metaphors and language discussed under social-cognition theories, stories are effective vehicles for convincing people to change their behavior. Symbolic events and activities—for example a kick-off day for a change initiative or campus day of dialogue—enable change initiatives to proceed (Gioia, Thomas, Clark, and Chittipeddi, 1996; Neumann, 1993).

There is some indication that college and university leaders use task forces, committees, events, and ceremonies to disguise what would otherwise be overt

power or influence strategies (Gioia, Thomas, Clark, and Chittipeddi, 1996). For example, a president cannot create a change that he decides is necessary for the institution; instead, he has a ceremonial event to kick off a committee and then establishes a group to examine the issue, focusing on philosophy and values. Therefore, there may be some interaction between political and cultural strategies.

Institutional culture: Research illustrates that institutional culture operates at several different levels, shaping the change process (Chermak, 1990; Dill, 1982). Bergquist's study of the four cultures of the academy (1992) shows the relationship between institutional culture—collegial, developmental, negotiating, or bureaucratic culture—and change processes. For example, at an institution where the developmental culture is prominent, training and development are likely to be the main strategies for change, whereas in the bureaucratic culture, planning and assessment would be important. The institutional culture ties not only to the process of change, but to reasons for change. In the bureaucratic culture, change is a response to threats in the environment, whereas on the developmental campus, the need to advance people's understanding would motivate change.

Birnbaum (1991a) and Levin (1998) examined how different institutional types, such as community colleges or liberal arts institutions, have distinctive change processes. The varying institutional types maintain particular cultures and structures; for example, collective bargaining at community colleges can influence the rate of change (Levin, 1998). Kezar and Eckel (forthcoming) demonstrated how unique institutional cultures also shape change processes. For example, an institution that has a history of customer service will reflect responsiveness to students in the strategies, reasons for, and outcomes of change. In a study of the impact of institutional culture on decision approaches, Smart, Kuh, and Tierney (1997) determine that leaders' main mistake is working counter to rather than within the culture in order to create change. Collectively, these studies suggest that institutional type and culture affect the change process and that, in most cases, working within the existing culture facilitates change (Chermak, 1990).

Deep transformation and paradigm shifts: A main area of exploration among cultural models is the notion of deep change that alters the culture of the insti-

tution. This deep change is often labeled *paradigm shift* (Simsek and Louis, 1994). Studies of transformational change in higher education illustrate that paradigm shifts are not typical and are extremely difficult to facilitate (Clark, 1983a, 1983b; Kezar and Eckel, forthcoming; Sporn, 1999). Results from the ACE Kellogg study of twenty-six institutions undertaking institutional transformation indicate that few are actually accomplishing the goal of transformational change even after five to ten years (Eckel, Hill, and Green, 1998; Kezar and Eckel, forthcoming). Simsek and Louis (1994) examine cultural paradigm shifts in higher education, finding that paradigm shifts do occur and that change can happen rapidly in higher education as institutions face anomalies or problems in their thinking (similar to Argyris's double-loop learning). But they noted that it appears that higher education institutions tend to incorporate and blend the old paradigm with the new paradigm. Thus, radical change is not really observable. This important finding may point to a direction for future research in which the changes that occur in higher education become more visible; as Clark notes (1983a), most outside observers do not perceive the amount of innovation that occurs within the academy. How do the new paradigm and old paradigm become integrated? The implication for higher education institutions is that they may need to focus more on the integration of old and new perspectives and processes than simply on change initiative.

Irrationality and ambiguity: Cohen and March (1974) and Clark (1976, 1983b) were among the first to illustrate that change in higher education is often thwarted or slowed by the ambiguous environment and, at times, the irrationality. Although ambiguity in goals was discussed at length in article four, the findings about the irrationality of the environment need further explanation. Research suggests that the individual's choice to change is *not* often made based on a review of fact-based data; instead, people are found to consider the implication of the change on the future of their division (political motivations), or based on intuition, or how this change relates to emotional commitments they have made, such as impact on their friends within the organization (Carr, 1996; Clark, 1976). Emotive motivations have been found to be a major factor in decisions to change (Benjamin, 1996; Bergquist, 1992; Neumann, 1993). Intuition, politics, and emotive decisions are typically labeled irrational approaches to decision making.

Culture of change: Although there is little evidence that there is a “culture of change,” this remains one of the most popular notions in the literature in higher education (Brown, 1997; Chermak, 1990; Frost and Gillespie, 1998; Parilla, 1993). People advocate for a culture of meaningful communication, clarity of institutional purpose, trust, respect, strong leadership, and team-work. It is suggested that an environment in which employees feel a sense of self-worth and there is a tolerance for different perspectives will lead to change (Taylor and Koch, 1996). These proposals for a culture of change are usually drawn from Schein’s (1985) and Senge’s (1990) work. Yet there is limited empirical proof that there is any culture that is more or less encouraging of change. It has also been noted that change is not always good, so it is unclear whether such a culture is functional or allows only positive change to occur.

There is research to suggest that a culture of risk facilitates innovation and adaptability. Many organizational theorists have found themselves deeply embedded in the study of constancy when an understanding of change became elusive. Most literature on constancy reveals that people are unaware of their values or beliefs, which is what makes change so difficult (Argyris, 1982). Constancy is a result of embedded patterns that have become subconscious (Schein, 1985). Staw (1976), for example, studied commitment within organizations. He notes the positive effects of persisting in a line of action that reaffirms previous decisions. To make a different choice questions the wisdom and competence of previous actions and decisions. The result of these findings has been the development of cultures of risk that allow people to change their future actions and approach situations differently (Argyris, 1982).

Multiple Models

Multiple models may respond to some of the unique characteristics of higher education institutions. For example, the dual orientations—professional and administrative—may need different models of change. As noted earlier, multiple models are attempts to draw together the insights and principles from more than one approach.

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Robert Birnbaum (1991a) has developed one of the best-known combined models of change in higher education in his cybernetic approach, which includes elements from evolutionary and social-cognition models. The cybernetic model is a loosely coupled, open system in which multiple organizational realities such as the collegium, bureaucratic organization, organized anarchy, and political system exist simultaneously to greater and lesser degrees, depending on the institution. Leaders are encouraged to reframe the way they assess situations and make decisions, integrating the various perspectives through cybernetic controls, which are “self-correcting mechanisms that monitor organizational functions and provide attention cues or negative feedback to participants when things are not going well” (Birnbaum, 1991a, p. 179). As suggested within social-cognition models, leaders are encouraged to look at the institution through multiple rather than one or two frames, because administrators looking at a problem through only one frame have narrow understandings of the problem or proposed change. In addition, as is characteristic of evolutionary models, leaders should avoid action and instead focus on cues within the system (feedback loops), assuring that appropriate monitoring systems are in place, making minor adjustments, and on rare occasions providing intervention on problems. The key role is assessment to determine when change is necessary, allowing the system to take care of itself. The organizational thermostats and feedback loops are features of evolutionary models and reflect ways that living systems provide response (Morgan, 1986), so the change agent’s role is to examine the system and not always to respond quickly. Thus, change tends to happen naturally within the system, and when leaders need to become involved they mostly play the role of examining the situation through different cognitive frameworks in order to diagnose the issue and develop a change strategy. Although Birnbaum mentions the political system and culture, these are not major elements of the model or factors that influence change. The efficacy of this model is mostly untested, but it is based on an accumulation of research that supports certain elements of the model.

A model proposed by Lueddeke (1999) within the constructivist tradition attempts to weave the cultural, social-cognition, evolutionary, and teleological models into what is called the adaptive-generative development model (AGD-M). AGD-M was specifically designed to address the unique environment of

higher education, in which shared governance is a hallmark and academic values are stressed. The model has six interrelated elements: (1) needs analysis; (2) research and development; (3) strategy formation and development; (4) resource support; (5) implementation and dissemination; and (6) evaluation. The research-and-development component includes a market and external-condition analysis characterizing the university as an open system that needs to monitor its environment, reflecting evolutionary assumptions. Change results from the shared construction of meaning facilitated by a truly inclusive and interactive team, which is the focus of the third step: strategy formation and development. In the stage of strategy formation and development, dialogue and open, critical reflection on the initiative are emphasized. This dialogue is supposed to lead to cultural change. Underpinning the entire model is the notion of learning and the idea that organizations need to go through periods of adaptive and generative learning, characteristics of social-cognition models. The sequential and rational orientation of the model also fits within the teleological model. Many of the approaches, such as needs analysis, research, strategy, resource support, and evaluation, are teleological strategies. Institutions both adapt to external and internal forces and generate solutions to problems; hence the importance of focusing on both adaptive and generative forces.

Summary

When examining how higher education institutions reflect the models of change that have emerged within the multidisciplinary field of organizational change, some valuable research-based principles emerge, which will be summarized in the next article. Some concerns also emerge.

In terms of concerns, people seem to become frustrated by the efficacy of political models for explaining change in higher education. Bureaucratic structures create standards of procedure and policies that can lead to fairness, in addition to providing efficiency and control. There are many protections for individuals within these bureaucratic devices. To acknowledge the highly political nature of change can make higher education participants cynical or suspicious. Yet, as Hearn (1996) notes, to not be aware of the political aspects, even if one rejects that approach, is naïve. For women and minority leaders,

in particular, political processes may have been used against them to limit their influence and advancement. To suggest embracing these approaches may seem problematic.

There have also been criticisms over the years about the organized anarchy model and garbage-can decision-making (Kerr and Gade, 1986). If efforts to plan change, especially at the institutional level, are doomed by the ambiguity and complexity inherent in these organizations, then what possible advice can be drawn from these studies? Still, many fruitful models have developed to respond to the ambiguous environment of higher education. Senge's (1990) learning organizations are meant as a response to the multilayeredness and complexity of organizations that were not encompassed in earlier models. I will acknowledge the frustration that can be associated with examining change through some of these models. Teleological models, which appear to empower individuals to create change, tend to be more attractive and feel more comfortable, yet may not be as successful as other models.

Also, there may be frustration related to evolutionary models. They describe forces, such as capitalism or the market, but offer little advice about how to address these deterministic forces (Collins, 1998). Professionals may try to understand how to use cultural or social-cognition models, but find little concrete information to work from. In addition, these models tend to describe the nature of change and do not necessarily address how to facilitate or create change. Often, people find themselves drawn to teleological models, mostly because they can best understand how to apply them to practice.

As noted earlier, choosing a model of change is an ethical and ideological choice; some people may feel more comfortable with certain models than with others (Morgan, 1986). Awareness of the assumptions of models makes it possible to compare them to the reader's own values and develop alignment with an appropriate model. This article does not advocate the value of any one approach, but describes what each model can tell us about the change process in higher education. The next article offers advice about how to draw on each category of models and develop a clearer understanding of change.

